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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,130	08/30/2000	Kent Malmgren	010315-092	1064

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EXAMINER

ROCHE, LEANNA M

ART UNIT	PAPER NUMBER
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1771

10

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A210

<b>Office Action Summary</b>	<b>Application N .</b>	<b>Applicant(s)</b>	
	09/651,130	MALMGREN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Leanna Roche	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2002 .
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>g</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claim 3 is objected to because of the following informalities: in line 2 of Claim 3, delete "um" and insert "µm". Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 1-15 are invalid as vague, indefinite, and functional because they merely set forth physical characteristics desired in an article, and do not set forth specific compositions which would meet such characteristics. Therefore, they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future and which would impart the desired characteristics. For example, the expression "a liquid absorbing material comprising an open-cell polymeric foam material...having an absorption rate at wetting of at least 0.4 ml/s...a liquid distribution capacity at an inclination of 30° of at least 15 g/g and a liquid storage capacity of at least 9% ..." is too broad and indefinite since it purports to cover every open-cell polymeric foam material which will perform the desired functions regardless of

its compositions, and in effect, recites compounds by what is desired that they do rather than what they are. The expression is also too broad since it appears to read upon materials that could not possibly be used to accomplish the purposes intended. See Ex Parte Slob (PO Bd App) 157 USPQ 172.

5. Claim 3 is vague and indefinite because in line 4 of the claim, Applicant claims "pore volume distribution measurements of at least 4 g/g synthetic urine", but in line 7 of the same claim, Applicant claims "pore volume distribution measurement of at least 8 ml/g". This confusion is the result of the cumbersome language and grammar of claim 3. The examiner suggests deleting the means of determining the gel liquid absorption and the capillary liquid absorption rather than claiming the methods for determining the values of these properties because the method of determining these values should be fully supported in the specification. For example, Claim 3 could be amended to read:

A liquid absorbent foam material as claimed in claim 1, having a first distribution of pores with a diameter less than 3  $\mu\text{m}$  which produces a gel liquid absorption of at least 4 g/g synthetic urine, and

a second distribution of pores with a diameter between 3 and 100  $\mu\text{m}$  which produces a capillary liquid absorption of at least 8 ml/g.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-15 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chen et al. (USPN 6261679) substantially as set forth in Paper No. 5, paragraphs 14-16.

New claims 8-12 recite limitations that were previously included in original claims 1-7, and which were considered in the rejection set forth in Paper No. 5, paragraphs 14-16.

New claims 13-15 recite the same limitations as Claim 1, except that Claims 13-15 further limit the pore sizes of the open-cell polymeric foam. Specifically, Claim 13 requires a first distribution of pore sizes between 0 and 3  $\mu\text{m}$  and a second distribution

of pore sizes between 3 and 100  $\mu\text{m}$ ; Claim 14 requires pore sizes between 0 and 500  $\mu\text{m}$ ; and Claim 15 requires a first distribution of pore sizes between 0 and 3  $\mu\text{m}$  and a second distribution of pore sizes between 3 and 500  $\mu\text{m}$ . Chen discloses pore sizes of 500  $\mu\text{m}$  or less (Claim 45) and discloses means of producing a distinct bimodal pore size distribution (Column 16, lines 10-24) but does not specifically disclose a first and second pore size distribution as claimed by Applicant. However, it appears that the open-cell fibrous absorbent structure of Chen is substantially identical to the presently claimed liquid absorbent open-cell polymeric foam material because both absorbent materials are made of substantially the same materials, polysaccharides or polypeptides (Column 12, lines 31-51) using substantially the same method, freeze drying, (Column 15, line 49 -Column 29, line 17). Thus, it is believed by the examiner that the open-cell fibrous absorbent structure of Chen inherently possesses a first and second pore size distribution within Applicant's presently claimed ranges. Additionally, the presently claimed a first and second pore size distribution would have obviously been present once the open-cell fibrous absorbent structure of Chen was provided. See *In re Best*, 195 USPQ 433 footnote 4 (CCPA 1977) as to the providing or this rejection under 35 USC 102 as well as 35 USC 103.

### ***Response to Arguments***

9. Applicant's amendments filed November 4, 2002 have been entered and carefully considered. Applicant's submission of a certified copy of Swedish Patent No.

9903071-0 on November 4, 2002 is acknowledged. Applicant's amendments to the specification are sufficient to overcome the previous objections to the specification for improper use of trademarks and for minor informalities set forth in Paper No. 5, paragraphs 2-3. Applicant's amendment to Claim 2 is sufficient to overcome the previous objection to Claim 2 in Paper No. 5, paragraph 4. Applicant's amendments to Claims 4 and 6 are sufficient to overcome the objections to Claims 4 and 6 in Paper No. 5, paragraph 5. Applicant's amendments to Claims 1 and 5 are sufficient to overcome the rejection under 35 USC 112, 2<sup>nd</sup> paragraph in Paper No. 5, paragraph 9. Applicant's amendments to Claim 3 are sufficient to overcome the rejections under 35 USC 112, 2<sup>nd</sup> paragraph in Paper No. 5, paragraphs 10-13.

10. Applicant's arguments filed November 4, 2002 regarding the rejections of Claims 1-7 under 35 USC 112, 2<sup>nd</sup> paragraph have been fully considered but they are not persuasive.

Applicant contends that the scope of the subject matter of claim 1 is clear because Applicant has not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims. This argument is not found persuasive because Ex Parte Slob (PO Bd App) 157 USPQ 172 teaches that language purporting to cover everything which will perform the desired functions regardless of its composition, and, in effect, reciting compounds by what it is desired that they do rather than what they are, are indefinite. Applicant's Claim 1 is directed to any generic open cell polymeric foam possessing an absorption rate, liquid distribution capacity and liquid storage capacity within specific ranges. The absorption rate, liquid distribution capacity

and liquid storage capacity of Applicant's Claim 1 are not structural limitations, but rather, are properties of Applicant's generic open cell polymeric foam. Because the language of Applicant's Claim 1 is directed to **any** generic open cell polymeric foam material which can perform the absorptive, storage and distributive functions claimed by Applicant, the scope of the claim is vague and Applicant's Claims 1-7 are indefinite.

Applicant contends that the Office Action does not identify any materials allegedly read upon by Claim 1 which could not be used to accomplish the purposes intended, and therefore contend that any reliance upon Ex Parte Slob is misplaced. This argument is not found persuasive because while Ex Parte Slob does state "we also find the expression too broad as it appears to read upon materials that could not possibly be used with a powdered detergent composition to accomplish the purposes intended", this is was an additional finding and Ex Parte Slob separately and specifically affirms that "claims merely setting forth physical characteristics desired in an article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional", which is the present case.

11. Applicant's arguments filed November 4, 2002 regarding the rejections of Claims 1-7 under 35 USC 102(e)/103(a) have been fully considered but they are not persuasive.

Applicant contends that the while Applicant's preferred embodiments define the pore structure as having an open cell polymeric foam with pores primarily between 0 and 500  $\mu\text{m}$ , "Chen does not provide sufficient detail concerning pore sizes to make a meaningful comparison with the present invention". This argument is not found



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persuasive because Claim 45 of Chen specifically states "said binder material forms an open-cell foam having a Cell Pore Size of about 500  $\mu\text{m}$  or less". Therefore, Chen specifically discloses Applicant's preferred embodiment, contrary to Applicant's contention.

Applicant contends that the Patent Office is required to provided evidence or scientific reasoning to establish the reasonableness that inherency exists before Applicant is required to demonstrate the subject matter shown to be in the prior art does not possess the characteristics relied upon. This argument is not found persuasive because as established in Paper No. 5, paragraphs 16,

Because Applicant's claims are directed to physical characteristics desired in an article rather than setting forth specific compositions that would meet such characteristic, the examiner was directed to Applicant's specification to determine the scope of Applicant's claim. While Chen does not specifically disclose values for the absorption rate, liquid distribution capacity and liquid storage capacity, it appears that the open-cell fibrous absorbent structure of Chen is substantially identical to the presently claimed liquid absorbent open-cell polymeric foam material because both absorbent materials are made of substantially the same materials using substantially the same method.

Thus, the evidence of inherency relied upon by the Patent Office is the fact that the materials used by Chen and the process used by Chen are substantially identical to the materials and process used by Applicant. Specifically, Applicant's specification teaches

that "the polymer is preferably a polymer containing functional crosslinkable groups, e.g. carboxy-, hydroxy- or amino groups, e.g. a polysaccharide or polypeptide. Examples of useful polysaccharides are carboxy methyl cellulose (CMC), carboxy ethyl cellulose, starch derivative, etc" (Applicant's specification bottom of page 8 - top of page 9). Chen teaches "...polymers which are also suitable for use, particularly for freeze drying and other embodiments of the present invention include...natural based polysaccharide polymers such as carboxymethyl celluloses, carboxymethyl starches...and synthetic polypeptides" (Column 12, lines 31-51).

The method for producing a foam material according to the invention is disclosed on pages 9 and 10 of Applicant's specification as follows:

- 1) Mixing, in any order or all at one time, a polymer solution of 0.5-10% by weight CMC in water, a suitable surfactant, optionally adding fibers, and optionally adding an alkaline compound
- 2) Foaming the mixture by mechanical agitation, gas injection or extrusion under pressure reduction.
- 3) Adding a cross-linking agent under strong mechanical stirring to the foamed mixture.
- 4) Shaping the liquid foam by placing it in a suitable mold.
- 5) Freezing the foam.
- 6) After thawing the frozen foam has transformed from a liquid to a solid, porous material having unique properties with respect to liquid acquisition, distribution and storage capacity.

With regard to the method of making the absorbent fibrous structure of Chen, Chen discloses:

- 1) Forming a solution of a soluble polymer in solvent, with hydrophilic fibers and optionally incorporating a surfactant into the soluble polymer/fiber material to render the polymeric material foamable (Column 11, lines 47-55 and Column 21, line 43 - Column 22, line 25).
- 2) Foaming the mixture of fibers, polymeric material and surfactant by any method including introduction of gas through injection or mechanical agitation or high-shear mixing (Column 16, lines 10-24).
- 3) Optionally incorporating a cross-linking agent either while the polymer is in solution or after the solvent has been removed from the solution used to prepare the foam (Column 29, line 20 - Column 31, line 34).
- 4) Optionally molding into a three-dimensional shape the foamed mixture before it is dried (Column 26, lines 13-23).
- 5) Freezing the foamed material at a relatively slow cooling rate to a temperature below the freezing point of the solvent (Column 17, line 66 - Column 18, line 39).
- 6) Removing the solvent from the frozen solution to form a water-swellable, water-insoluble binder material stabilizing an absorbent fibrous structure (Column 17, line 66 - Column 18, line 39).

Therefore, because the materials and methods of Chen have been established to be substantially identical to those disclosed by Applicant, Applicant's claimed properties would inherently or obviously be present once the absorbent fibrous structure of Chen

was formed; and the examiner has provided sufficient evidence to suggest that the properties claimed by Applicant are completely inherent to the materials and process disclosed in Applicant's specification. Applicant has not provided any evidence to indicate that the claimed absorption rate, liquid distribution capacity, and liquid storage capacity are not inherent to Applicant's liquid absorbing material. Because the USPTO does not have the means to conduct analytical experiments, the burden of proof is shifted to the applicants to prove that these properties are not inherent. See *In re Fitzgerald*, 619F.2d 67, 205 USPQ 594 (CCPA 1980). Additionally, Applicant has not shown why it would be not be obvious to optimize these properties in an invention which is directed to forming an absorbent material for use in making absorbent articles.

With regard to Applicant's discussion of the specifics of each of the working examples of Chen, Chen is not limited to the specifics of their working examples, but to their overall teachings. Therefore, these arguments are not found persuasive.

Additionally, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). The mere allegation that the fibers and egg white of Examples 1 and 2 of Chen are "**unlikely to hold** enough gel liquid to exhibit a liquid storage capacity of at least 9% measured through a CRC method," includes no factual evidence and therefore holds not weight. The allegation that with regard to Example 3 of Chen, "Chen does not provide sufficient disclosure to support a conclusion that the resulting fibrous material would have the pore distribution and absorption properties set forth in Claim 1", Applicant has provided no factual evidence to support this claim, and therefore it holds not weight. The

allegation that in Example 4 of Chen, “the process set forth in example 4 **is believed to** produce a material which almost solely absorbs liquid by capillary action...almost no gel swelling will be present and the liquid storage capacity **is unlikely to be** at least 9%”, includes absolutely no factual evidence and therefore holds not weight. The allegation that with regard to Example 5 of Chen, “this material also **is not expected to** result in gel swelling, and therefore the liquid storage capacity **is unlikely to be** at least 9%”, includes no factual evidence and therefore holds not weight. And with regards to the allegation that in Example 6 of Chen, “this method appears to be **unlikely to result in** the pore distribution and liquid storage and distribution characteristics set forth in Claim 1”, there is absolutely no factual evidence provided for this statement, and therefore it holds not weight. Again, it is emphasized that the examiner has relied on the teachings of Chen in it’s entirety and has not limited examination to the few working examples disclosed in the Chen disclosure.

With regard to Applicant’s argument that under 35 USC 103(a), to find motivation or suggestion there should be a “reasonable likelihood that the claimed invention would have the properties disclosed by the prior art teachings”, both Applicant’s invention and Chen’s invention are directed to absorbent materials for making absorbent articles, and both are focused on intake, distribution and retention of human body fluids (see Chen Column 2, lines 43-45). Therefore, there is an obvious motivation to optimize the absorption rate, liquid distribution capacity and liquid storage capacity of Chen because Chen is specifically directed to producing a material with excellent intake, distribution and retention of human body fluids.

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12. All of the above stated responses are also applicable to new Claims 8-12 because these claims include only previously recited subject matter from Claims 1 and 3.

13. With regard to new Claims 13-15, as stated above, Chen does disclose pore sizes of less than 500  $\mu\text{m}$  (as claimed in Claim 14) but does not disclose the specific first and second pore size distributions as claimed in Claims 13 and 15. However, it is believed that these features are a direct result of the materials and method used for producing the resultant liquid absorbent material. Therefore, new claims 13-15 are not patentable.

14. Additionally, as currently written, Applicant's Claims 13-15 read that **any** open-cell polymeric foam material having pore sizes ranging from 0 to 100  $\mu\text{m}$  (with regard to Claim 13) and 0 to 500  $\mu\text{m}$  (with regard to Claims 14 and 15) would display the absorption rate, liquid distribution capacity and liquid storage capacity stated by Applicant because at present the only structural limitations claimed by Applicant are 1) open-cell, 2) polymeric, and 3) pore size distribution range. In fact, the presence of only one pore of 3  $\mu\text{m}$  or less would read on Applicant's first distribution of pore sizes between 0 and 3  $\mu\text{m}$ .

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leanna Roche whose telephone number is 703-308-6549. The examiner can normally be reached on Monday through Friday from 8:30 am to 6:00 pm (with alternate Mondays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Imr  
January 6, 2003



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